What is claimed is:

1. An apparatus for controlling flow of a fluid from at least one inlet port to at least one outlet port through a fluid flow passage in response to an electrical activation comprising:

a support having a rigid, non-flexible portion, at least one pivotable relatively rigid, non-flexible, folded-back arm portion extending from the rigid portion, at least one surface on the at least one folded-back arm portion for movement relative to the support, and a rigid, non-flexible force transfer member operably positioned for driving the at least one pivotable folded-back arm portion in rotational movement with a loss of motion of less than 40%;

an electrically operated actuator operably engaged between the rigid, non-flexible portion and the force transfer member to drive the force transfer member relative to the rigid, non-flexible portion to pivot the at least one pivotable folded-back arm portion in response to an electrical activation of the actuator; and

a manifold including a fluid passage communicating with at least one valve seat and operably engageable with respect to at least one corresponding valve body for movement between a closed position in sealing engagement with the valve seat and an opened position spaced from the valve seat, wherein at least one of the valve seat and valve body is operably movable with respect to the other by the electrically operated actuator through the support in response to an electrical activation.

2. The apparatus of claim 1, wherein the at least one valve seat and corresponding valve body define a pressure balanced valve.

3. The apparatus of claim 1, wherein the at least one valve seat and corresponding valve body define a non-pressure balanced valve.

4. The apparatus of claim 1, wherein the manifold supports and connects at least two valves to at least one inlet port and at least one outlet port with

an individually operable electrical actuator for each valve, and at least two fluid dispensing orifices associated with the manifold, each orifice spaced 4.5 mm from one another and positioned inline with a corresponding fluid control valve, such that the corresponding valve is immediately adjacent the orifice minimizing dead volume between each valve and the corresponding orifice..

5. The apparatus of claim 1, wherein the electrically operated actuator is a piezoelectric actuator.

6. The apparatus of claim 1, wherein the rigid portion is generally U-shaped and includes a web extending between a pair of rigid arm portions

7. The apparatus of claim 6, wherein one of the pivotable folded-back arm portions is pivotably connected to one of the rigid arm portions and the other of the pivotable folded-back arm portions is pivotably connected to the other of the rigid arm portions.

8. The apparatus of claim 7, wherein the rigid portion of the support is interposed between the pivotable folded-back arm portions, such that the force transfer member is adjacent one end of the pivotable folded-back arm portions and the at least one surface defines opposing surfaces on the pivotable folded-back arm portions located adjacent to the web of the support.

9. The apparatus of claim 7, wherein the pivotable arm portions are mechanically connected to the support.

10. An apparatus for controlling flow of a fluid from at least one inlet port to at least one outlet port through a fluid passage in response to an electrical activation comprising:

a support having a rigid non-flexible portion, first and second pivotable relatively rigid, non-flexible folded-back arm portions extending from the rigid portion, such that the rigid portion is positioned interposed between the first and second pivotable folded-back arm portions, a pair of opposing surfaces with one opposing surface supported by each of the pivotable folded-back arm portions for movement relative to one another, and a rigid, non-flexible force transfer member operably positioned for driving the first and second pivotable folded-back arm portions in rotational movement with a loss of motion of less than 40%, and first and second flexible hinge web portions extending in close proximity to one another allowing flexing movement of the at least one relatively rigid, non-flexible folded back arm with respect to the rigid portion and the force transfer member;

an electrically operated actuator operably engaged between the rigid non-flexible portion and the rigid, non-flexible force transfer member to drive the force transfer member relative to the rigid portion to pivot the first and second pivotable folded-back arm portions in response to an electrical activation of the actuator; and

a manifold including at least one fluid passage communicating with at least one valve seat and operably engageable with respect to at least one corresponding valve body for movement between a closed position in sealing engagement with the valve seat and an opened position spaced from the valve seat, wherein at least one of the valve seat and valve body is operably movable with respect to the other in response to an electrical activation of the electrically operated actuator through the support.

11. The apparatus of claim 10, wherein the at least one valve seat and corresponding valve body define a pressure balanced valve.

12. The apparatus of claim 10, wherein the at least one valve seat and corresponding valve body define a non-pressure balanced valve.

13. The apparatus of claim 10, wherein the manifold supports and connects at least two valves to at least one inlet port and at least one outlet port with an individually operable electrical actuator for each valve, and at least two fluid dispensing orifices associated with the manifold, each orifice spaced 4.5 mm from one another and positioned inline with a corresponding fluid control valve, such that the corresponding valve is immediately adjacent the orifice minimizing dead volume between each valve and the corresponding orifice..

14. The apparatus of claim 10, wherein the actuator is a piezoelectric device.

15. The apparatus of claim 10, wherein the rigid portion is generally U-shaped and includes a web extending between a pair of rigid arm portions.

16. The apparatus of claim 15, wherein one of the pivotable folded-back arm portions is pivotably connected to one of the rigid arm portions and the other of the pivotable folded-back arm portions is pivotably connected to the other of the rigid arm portions.

17. The apparatus of claim 16, wherein the force transfer member is adjacent one end of the pivotable folded-back arm portions and the opposing surfaces of the pivotable folded-back arm portions are adjacent to the web of the rigid portion of the support.

18. The apparatus of claim 16, wherein the pivotable arm portions are mechanically fastened to the support.

19. An apparatus for moving at least one of a pair of opposing surfaces in response to an electrical activation comprising:

a support having a rigid, non-flexible, single-piece, monolithic portion of generally U-shaped configuration with a web extending between a pair of rigid arm portions, first and second pivotable, relatively rigid, non-flexible, folded-back arm portions of generally L-shaped configuration extending from the rigid arm portions such that the rigid non-flexible portion is positioned interposed between the first and second pivotable folded-back arm portions, a pair of opposing surfaces with one opposing surface on each of the pivotable folded-back arm portions for movement relative to one another, and a rigid, non-flexible force transfer member operably positioned for driving the first and second pivotable folded-back arm portions in rotational movement with a loss of motion of less than 40%, such that the force transfer member is adjacent one end of the pivotable folded-back arm portions and the opposing surfaces of the pivotable folded-back arm portions are adjacent to the web of the rigid non-flexible portion of the support;

first and second flexible hinge web portions extending in close proximity to one another, the first hinge web portion extending between the force transfer member and operably associated with the at least one rigid folded back arm, the second hinge web portion extending between the rigid portion and the at least one rigid folded back arm;

a piezoelectric actuator operably engaged between the rigid non-flexible portion and the force transfer member to drive the force transfer member relative to the rigid non-flexible portion to pivot the first and second pivotable folded-back arm portions in response to an electrical activation of the actuator; and

a manifold including at least one fluid passage communicating with at least one valve seat and operably engageable with respect to at least one corresponding valve body for movement between a closed position in sealing engagement with the valve seat and an opened position spaced from the valve seat, wherein at least one of the valve seat and valve body is operably movable with respect to the other in response to an electrical activation of the electrically operated actuator through the support.

20. The apparatus of claim 19, wherein the pivotable arm portions are mechanically fastened to the support.